

ABSTRACT OF THE DISCLOSURE

An information frame of a new format transmitted according to a radio link protocol (RLP), and a device and method for transmitting and receiving the information frame in a mobile communication system. The information frame is comprised of a plurality of consecutive multiplex frames each having a given length. The multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data. At least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame.